

multimec® basic switch modules

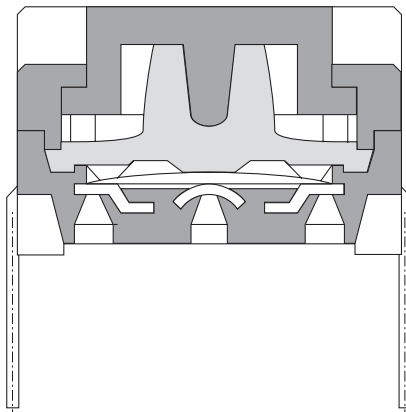
Through-hole Versions						
3A	3C	3E	3F	3F	3F	3F
For 1A/1B/1M/1ZA/1ZB	w/LED for 1C/1H		For 3E actuators/Varimec	For 1D/1K/1N/1P/1S/1T/1U/1V/1WA/1WD/1WG/1WP/1X/1ZC/1GA/1GC	w/LED for 1D/1E/1F/1N/1Q/1R/1S/1X	w/LED for 1K/1KB/1KC/1T/1U/1V/1WA/1WD/1WP
Standard Versions						
3ATL6 3ATH9	3ATL600/20/40/80	3CTL6/3CTL9 3CTH9	3ETLXX-H* 3ETHXX-H*	3FTL6 3FTH9	3FTL600/20/40/60/80/ 2040/8020/8040	3FTL623/45/88
* 3E available in 6 standard heights: 08.0, 09.5, 10.4, 11.0, 12.0, 15.0 mm. Other heights between 08.0 and 15.0 mm are available upon request.						
Specials: Gold contacts, quiet version and actuation force other than 3.0N						

Surface Mount Versions				Right Angle Versions			
3A	3C	3E	3F	3C	3E	3F	3F w/LED
For 1A/1B/1M/1ZA/1ZB		For 3E actuators/Varimec	For 1D/1K/1N/1P/1S/1T/1U/1V/1WA/1WD/1WP/1X/1ZC/1GA/1GC		For 3E actuators/Varimec	For 1D/1K/1N/1P/1S/1T/1U/1V/1W/1WA/1WD/1WP/1X/1ZC/1GA/1GC	For 1D/1E/1F/1N/1Q/1R/1S/1X
Standard Versions				Standard Versions			
3ASH9/3ASH9R	3CSH9/3CSH9R	3ESH9/3ESH9R	3FSH9/3FSH9R	3CTL6RAS	3ETXX-X.XRAS	3FTL6RAS	3FTL600/20/40/60/80/ 2040/8020/8040RAS

Co-planarity = ≤ 0.05

DIMENSIONS (mm) Unless otherwise specified, all tolerances ± 0.2

multimec® Cross Section



For updates of products and/or changes of specifications please see www.mec.dk

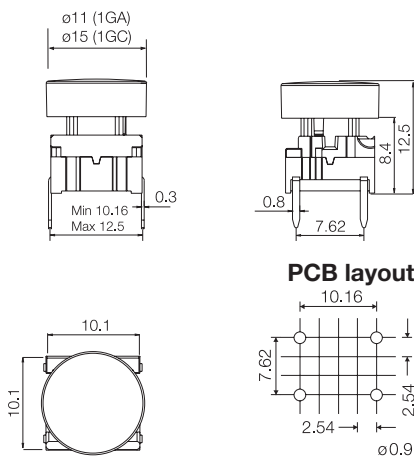
multimec® 3F + 1GA/1GC

Technical Data

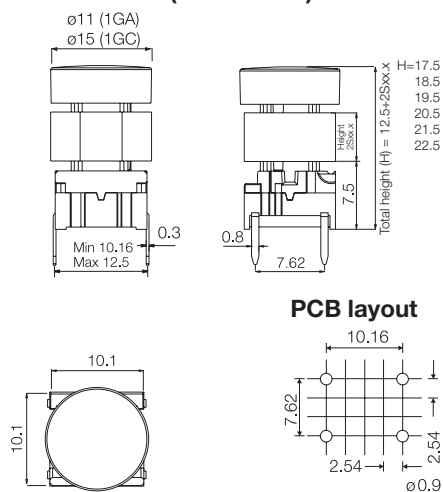
- through-hole or SMD
- 50mA/24VDC
- single pole/momentary
- 10.000.000 operations life time
- IP67 sealing
- temperature range:
 - low temp: -40/+115°C
 - high temp: -40/+160°C



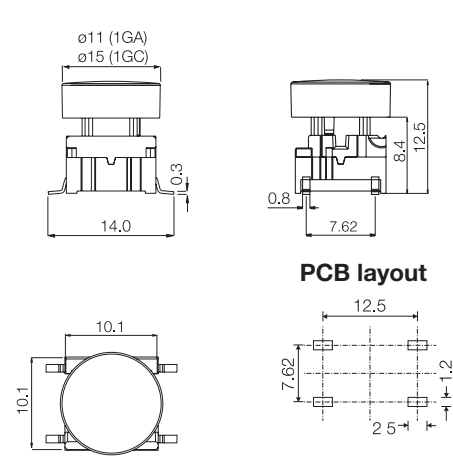
Dimensions (through-hole)



Dimensions (w/extender)



Dimensions (SMD)



How to order

3 F
Switch

Mounting
T through-hole
S surface mount

L 6 low temp.
H 9 high temp.

+

1 G A 0 9
Cap black

1 G C 0 9
Cap black


+

2 S 0 9 - . 0
Extender black

 (Optional)
 Adds 5-10 mm
 to total height.

Height
05.0
06.0
07.0
08.0
09.0
10.0

Keycap	Variable Extender	H (height) mm	Example
1GA/1GC		12.5	H 1
1GA/1GC	2S09-05.0	17.5	H 2
	2S09-06.0	18.5	
	2S09-07.0	19.5	
	2S09-08.0	20.5	
	2S09-09.0	21.5	
	2S09-10.0	22.5	H 3

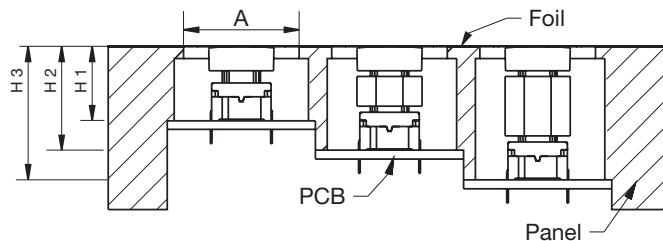
H = Overall height

Overall heights below 12.5 mm - Please see Multimec® versions 3C and 3E.

All 2S09 extenders are stackable giving the possibility to match most overall heights.

 A = We recommend you to allocate enough space for travel of the foil and leave the area free from adhesive.
 Switch travel = 1 mm.

H = We recommend you to calculate this dimension from the top of the PCB to the inner top of the panel.


Ordering example: 3FTL6 + 1GA09 or 3FTL6 + 2S09-07.0 + 1GC09

 For updates of products and/or changes of specifications please see www.mec.dk

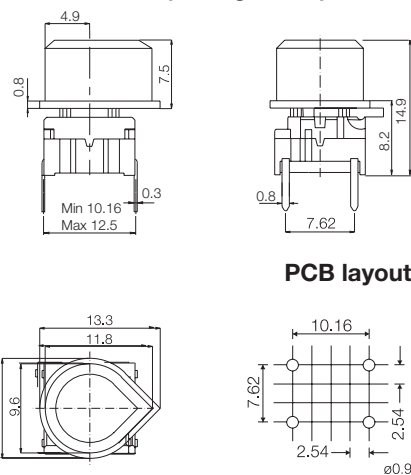
multimec® 3F + 1N

Technical Data

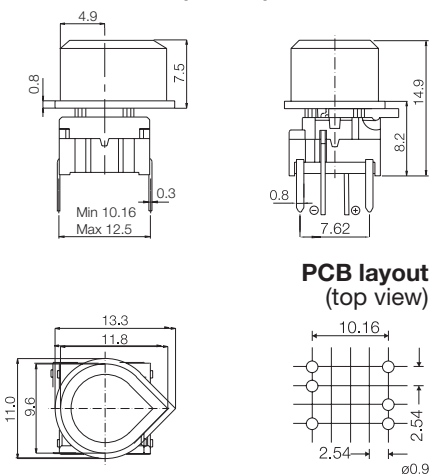
- through-hole or SMD
- 50mA/24VDC
- single pole/momentary
- 10.000.000 operations life time
- IP67 sealing
- temperature range:
 - low temp: -40/+115°C
 - high temp: -40/+160°C



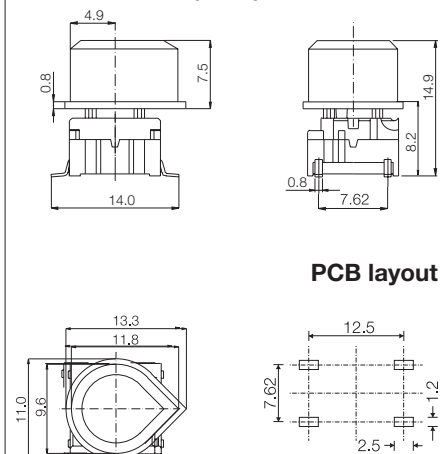
Dimensions (through-hole)



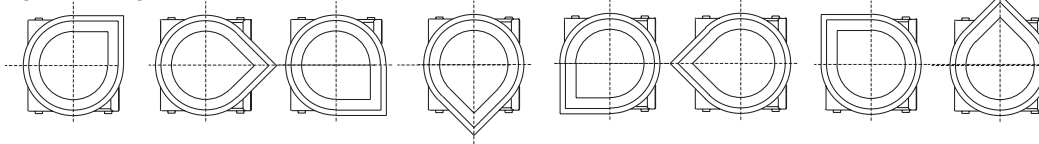
Dimensions (w/LED)




Dimensions (SMD)




8 different position options



How to order

3 F	<input type="checkbox"/>	<input type="checkbox"/>	+	1 N	<input type="checkbox"/>
Switch	Mounting	L 6 low temp. H 9 high temp.		Cap	00 blue 03 grey 04 yellow 08 red 09 black
	T through-hole S surface mount				

3 F	T	<input type="checkbox"/>	<input type="checkbox"/>	+	1 N	<input type="checkbox"/>
Switch	Mounting	L 6 low temp. H 9 high temp.	LED		Cap	10 frosted blue 12 frosted green 14 frosted yellow 16 frosted white 18 frosted red
	T through-hole		00 blue 20 green 40 yellow 60 white 80 red 2040 green/yellow 8020 red/green 8040 red/yellow			

Keycaps shown on this page can also be used on
illume™ switch 4F - see page 13

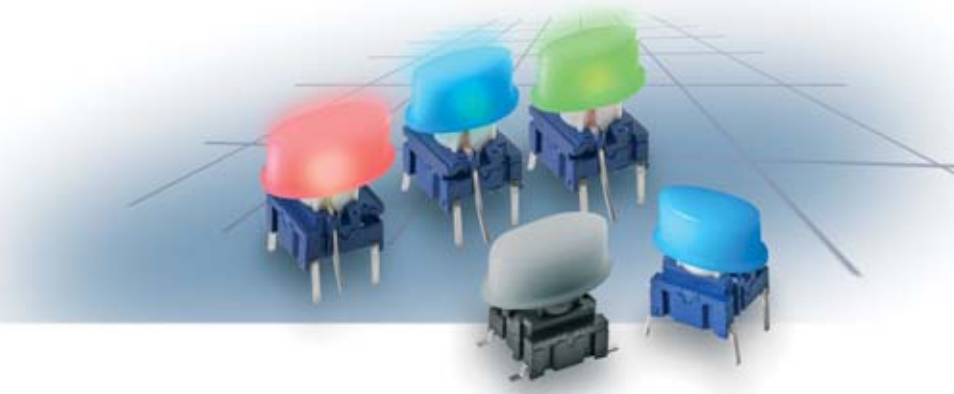
Ordering example: 3FTL6 + 1N09 or 3FTL680 + 1N18

For updates of products and/or changes of specifications please see www.mec.dk

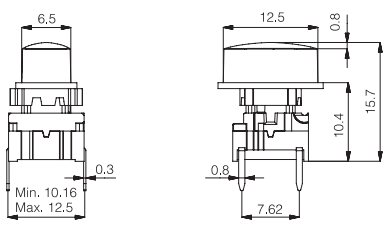
multimec® 3F + 1WA/1WD/1WP

Technical Data

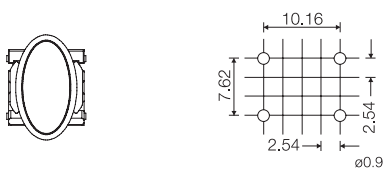
- through-hole or SMD
- 50mA/24VDC
- single pole/momentary
- 10.000.000 operations life time
- IP67 sealing
- temperature range:
low temp: -40/+115°C
high temp: -40/+160°C



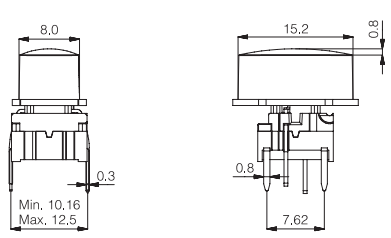
Dimensions (through-hole) 1WA



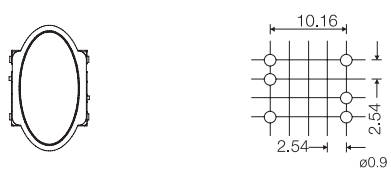
PCB layout



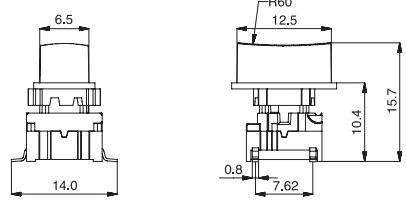
Dimensions (w/LED) 1WD



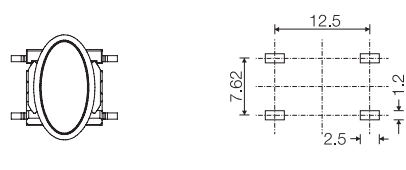
PCB layout (top view)



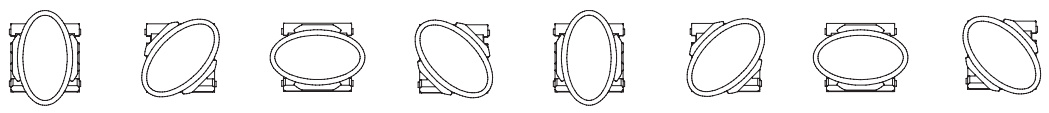
Dimensions (SMD) 1WP



PCB layout



8 different position options



How to order

3 F	<input type="checkbox"/>	<input type="checkbox"/>	+	<input type="checkbox"/>	<input type="checkbox"/>
Switch	Mounting	L 6 low temp. H 9 high temp.		Cap	00 blue 03 grey 08 red 09 black 30 ultra blue 40 pigeon blue 42 aqua blue 53 metal light grey 57 metal dark grey
	T through-hole S surface mount			1WA 1WD 1WP	

3 F	T	<input type="checkbox"/>	<input type="checkbox"/>	+	<input type="checkbox"/>	<input type="checkbox"/>
Switch	Mounting	L 6 low temp. H 9 high temp.	LED		Cap	16 frosted white
	T through-hole		23 green 45 yellow 88 red		1WA 1WD 1WP	

Keycaps shown on this page can also be used on **illumecc™ switch 4F** - see page 13

Ordering example: 3FTL6 + 1WA09 or 3FTL680 + 1WP16

For updates of products and/or changes of specifications please see www.mec.dk

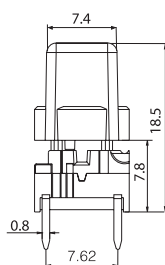
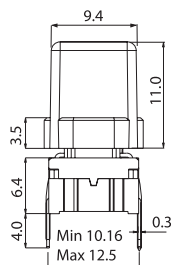
multimec® 3F + 1X

Technical Data

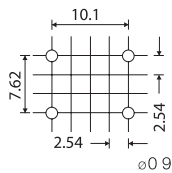
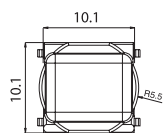
- through-hole or SMD
- 50mA/24VDC
- single pole/momentary
- 10.000.000 operations life time
- IP67 sealing
- temperature range:
 - low temp: -40/+115°C
 - high temp: -40/+160°C



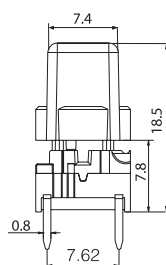
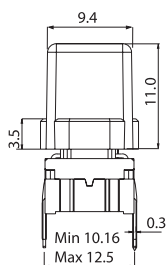
Dimensions (through-hole)



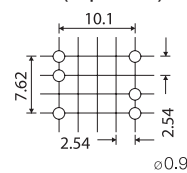
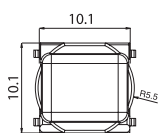
PCB layout



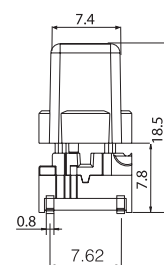
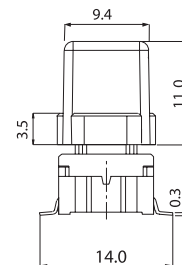
Dimensions (w/LED)



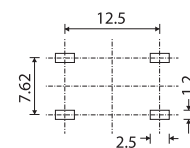
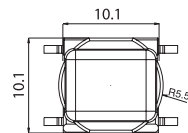
PCB layout (top view)



Dimensions (SMD)



PCB layout



How to order

3 F
Switch

Mounting
T through-hole
S surface mount

L 6 low temp.

H 9 high temp.

+
1 X
Cap

00 blue

02 green

03 grey

04 yellow

06 white

08 red

09 black

30 ultra blue

40 dusty blue

42 aqua blue

32 mint green

33 tele grey

34 melon

38 noble red

50 metal dark blue

53 metal light grey

57 metal dark grey

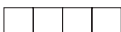
58 metal bordeaux

3 F
Switch

Mounting
T through-hole

L 6 low temp.

H 9 high temp.

+

LED
00 blue

20 green

40 yellow

60 white

80 red

2040 green/yellow

8020 red/green

8040 red/yellow

1 X
Cap

11 transparent

16 frosted white

Keycaps shown on this page can also be used on
illumeC™ switch 4F - see page 13

Ordering example: 3FTL6 + 1X09 or 3FTL680 + 1X11

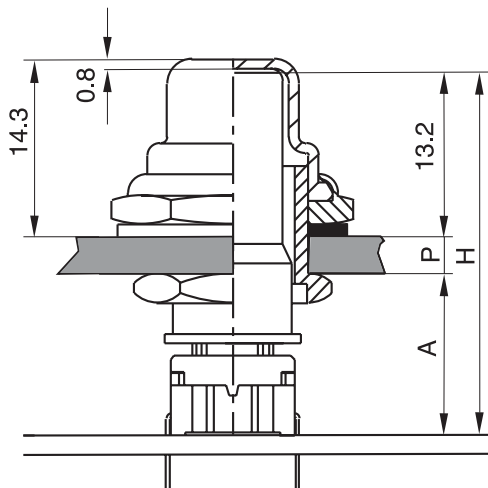
For updates of products and/or changes of specifications please see www.mec.dk

multimec[®] Aquamec[™]

Specifications switches: Specifications Sealing Boot:

- through-hole or SMD
- 50mA/24VDC
- single pole/momentary
- 10.000.000 operations life time
- IP67 sealing
- temperature range:
low temp: -40/+115°C
high temp: -40/+160°C

- Operating temperature: -40/+85°C
- IP67 sealing
- sealing life time: 2.000.000 operations
- material: silicone



$$H = A + P + 13.2$$

This leaves nominal 0.3 mm clearance between the top of the cap and the inner side of the sealing boot to accomplish assembly tolerances. **A** can be chosen between 10 -13 mm, we recommend 10 mm to reduce building height and optimize cap guidance.

A	P	CAP	H	BUSHING
10.0	1.0	AQCXX-24.2	24.2	AQN-0.5
10.0	2.0	AQCXX-25.2	25.2	AQN-0.5
10.0	3.0	AQCXX-26.2	26.2	AQN-2.5
10.0	4.0	AQCXX-27.2	27.2	AQN-2.5

Cap is available in black (09) or transparent (11).




The dimension H is the overall height of the switch+cap.



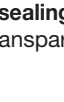
Bushing AQN-0.5 accepts panel thickness (P) 0.5-2.5 mm.

Bushing AQN-2.5 accepts panel thickness (P) 2.5-4.0 mm.

Panel cut out \varnothing 12.0 \pm 0.2.

How to order

3 F	<input type="checkbox"/>	<input type="checkbox"/>	+	AQN	-	<input type="checkbox"/>	.	<input type="checkbox"/>	+	AQC	<input type="checkbox"/>	<input type="checkbox"/>	-	<input type="checkbox"/>	.	<input type="checkbox"/>	<input type="checkbox"/>	+	AQB01	<input type="checkbox"/>	<input type="checkbox"/>
Switch	Mounting	L 6 low temp. H 9 high temp.		Bushing	Panel					Cap			Overall Height						Sealing boot, incl. sealing ring		
	T through-hole S surface mount				0.5 2.5					09 black 11 transparent			24.2 25.2 26.2 27.2						09 black 11 transparent		

3 F	T	<input type="checkbox"/>	<input type="checkbox"/>	+	AQN	-	<input type="checkbox"/>	.	<input type="checkbox"/>	+	AQC	<input type="checkbox"/>	<input type="checkbox"/>	-	<input type="checkbox"/>	.	<input type="checkbox"/>	<input type="checkbox"/>	+	AQB01	<input type="checkbox"/>	<input type="checkbox"/>
Switch	Mounting	L 6 low temp. H 9 high temp.			Bushing	Panel				Cap			Overall Height						Sealing boot, incl. sealing ring			
	T through-hole					0.5 2.5				11 transparent			24.2 25.2 26.2 27.2						11 transparent			
					LED																	
					00 blue 20 green 40 yellow 60 white 80 red 2040 green/yellow 8020 red/green 8040 red/yellow																	

Keycaps shown on this page can also be used on **illumec[™] switch 4F** - see page 13

Ordering example: AQB0109 + AQC09-27.2 + AQN-2.5 + 3FTL6

For updates of products and/or changes of specifications please see www.mec.dk

Mouser Electronics

Authorized Distributor

Click to View Pricing, Inventory, Delivery & Lifecycle Information:

Apem:

[3FSH9](#) [3FTH9](#) [3FTH92040](#) [3FTL6](#) [3FTL620](#) [3FTL600](#) [3FTL68020](#) [3FTL645](#) [3FTL640](#) [3FTL680](#) [3FSH9R](#)
[3FTL6RAS](#) [3FTH9RAS](#) [3FTH900](#) [3FTH940](#) [3FTH945](#) [3FTH9-2SL](#) [3FTH98020](#) [3FTH98040](#) [3FTL62040](#)
[3FTL620S](#) [3FTL623](#) [3FTL6-2SL](#) [3FTL688](#) [3FTL6Q](#) [3FTL6Q-2SL](#) [3FTL6S](#) [3FTL6S00](#) [3FTL6S20](#) [3FTL6S2040](#)
[3FTL6S40](#) [3FTL6S60](#) [3FTL6S80](#) [3FTL6S8020](#) [3FTL6S8040](#) [3FXXX00](#) [3FXXX20](#) [3FXXX2040](#) [3FXXX24](#)
[3FXXX40](#) [3FXXX45](#) [3FXXX61](#) [3FXXX80](#) [3FXXX8020](#) [3FXXX8040](#) [3FXXX89](#) [3FT6646](#) [3FTH980](#) [3FTH920](#)
[3FTH920RAS](#) [3FTH946](#) [3FTH9Q](#) [3FTH987](#) [3FTH965](#) [3FTH924](#)